

Vol. 13, No. 8

TAMPA, FLORIDA, AUGUST, 1932

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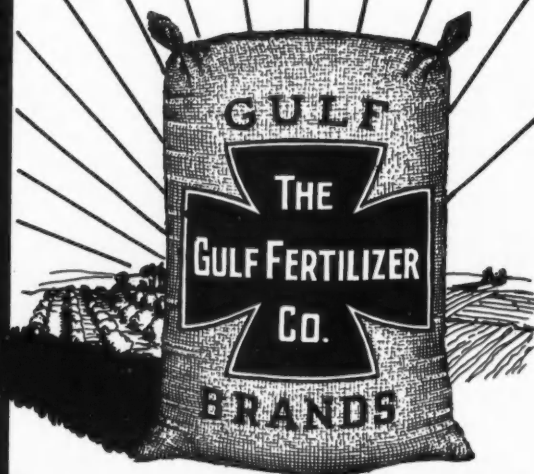
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Why take ten years
when five will do?

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p l a n t food for
growing young cit-
rus trees. Cut the
development per-
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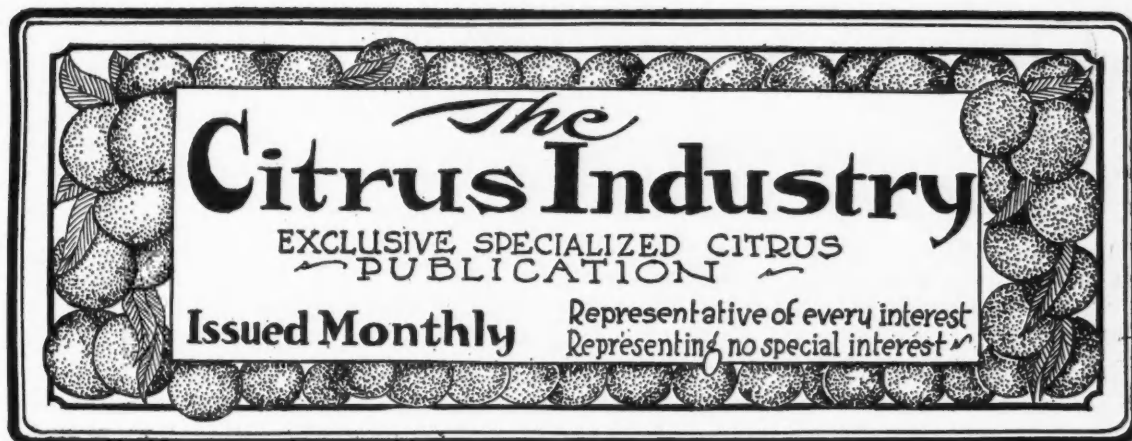
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Vol. 13

TAMPA, FLORIDA, AUGUST, 1932

No. 8

Cultivation, Cover Crops and Mulching of Citrus

In attempting to address this meeting I feel very much like a Primer scholar called upon to demonstrate a problem for the Algebra class and it will take only a very few moments to tell all I know about my subject and most of what I think.

It seems to me that there has been as much difference of opinion among growers regarding the proper practices in "Cultivation, Cover Crops and Mulching of Citrus" as any other phase of grove management. What I have to say applies to the grove I have charge of and may or may not apply to groves located on entirely different soil. I consider mulching a very vital point in making a grove at Port Mayaca, but I distinctly recall several experiments made by growers in the Redlands District of Dade County about seventeen years ago where mulching was a total failure. The groves in question were heavily mulched with prairie hay and for a year or two made more than average growth, but later practically all died during a period of drouth. Examination showed that the roots had grown up into the mulch during normal rains and were apparently unable to reach their usual supply of soil moisture when the rains ceased.

During the past three years I have made a number of comparative tests of mulching and non-cultivation com-

pared with clean cultivation and am convinced that, under our conditions, mulching is essential to the production of a healthy grove. If I were to list them according to my idea of their relative importance, it would be "Mulching, Cover Crops and Cultivation of Citrus".

The general plan of handling the 500 acres of citrus at Port Mayaca is to mulch each tree as heavily as the available supply of material will permit, grow as much cover crop in the middles as possible and reduce cultivation to a minimum. It has been my observation that a dollar spent in mulching has brought us better returns than a dollar spent in cultivation.

This is a very simple and practical plan, but like most simple and practical plans, has one difficult point. That is, where to get this large quantity of material. A one and one-half ton truck with large rack can haul sufficient dried material to mulch an acre in about eight loads. Multiply this by 500 and you get 4000 loads, which is a lot of grass in any language.

Wild grass makes excellent mulch where a large acreage smooth enough to work with machinery is available without a prohibitive haul. We have used hundreds of loads of sawgrass and found it very good, but hard to handle and growing on soil too wet to work with machinery under average weather conditions. Pruning of

Brazilian Oaks, which are planted in large numbers for windbreaks have proved a very good minor source, as the prunings have to be disposed of in some way and they make a very good mulch. A number of experiments have been made with partly dried muck, using from five to ten tons per acre. This has apparently been profitable from a soil improving standpoint where the cost of handling was not too high, but of practically no value as a mulch. If we had them available, we would use large quantities of planer shavings.

The best all around source has been to plant adjoining trucking land to *Crotalaria* during the summer when the land is otherwise idle. The growth was about equal parts *Crotalaria*, grass and weeds, but the tonnage was good, it was economical to handle and the results in the grove very satisfactory. The main point seems to be to get any organic material which can be had in sufficient quantities and at low enough cost.

I adopted the mulch method because comparative tests showed that the trees did much better with the mulch than without, and these tests have been carried on long enough to be reasonably sure that this improvement will continue. In testing a grove practice, it takes several years to know what the results actually are. In one case I treated forty acres of young grove with an application of

(Continued on page 24)

Orange County's Five Year Program

A Plan and Survey by the Orange County Chamber of Commerce, Orlando, Florida, for the Purpose of Bringing to Orange County "1000 Farmers in Five Years".

Knowing that the stability and the prosperous condition of Orange County has been largely due to the development of our agricultural resources, and feeling that an expansion of this agricultural development will bring untold wealth and advantages to this county, the Orange County Chamber of Commerce considered it advantageous to foster this movement and it offers to the prospective settler the information contained herein, with the hope that it will set forth a true and accurate idea of conditions as they exist at the present time.

No pictures have been painted of what has been done nor has any suggestion been made as to what is possible in the future. No one is able to say what unusual or natural production or marketing problems will face us in the future. It is our aim to give the complete facts so that any person contemplating considering Orange County for a location might have this data, and that he can weigh the merits of this section and decide for himself.

No special inducements or definite promises will be made. In the hope of securing "1000 farmers in five years", the only "inducement" will be a presentation of the real facts concerning agriculture in this Central Florida. The advantages of Orange County will be given, results of successful farming over a period of many years are available for study by those interested. Accurate information on cost production is available from reliable sources. Specific questions will be answered by experts and fuller details given.

Where the marketing of farm products are now being taken care of satisfactorily, no changes are planned. Where assistance is needed, constructive thought by community leaders will be available for bettering the marketing of those products not now enjoying ready, profitable distribution.

To the newcomer in this county, special stress is laid upon the fact

that this county has an Agricultural Agent, supported by the U. S. Department of Agriculture, the State Department of Agriculture and by the people of Orange County, whose advice should be sought and followed on problems confronting them. Also they should get reliable information from successful farmers in the same line in the section or community in which they prefer to locate.

Briefly here are a few salient points. Orange County ranks second in the state in shipments of citrus fruits and vegetables. There was shipped from this county last year a carload of fruit or vegetables every 47 minutes of the day and night. Raw land can be had at very reasonable prices. Living costs are very moderate. Excellent community life for social advantages. Good schools and nearly every church denomination represented in this county.

The Orange County Chamber of Commerce considers the following advice as fundamental to successful farming in Orange County, Florida, and these ideas are a part of Orange County's plan for "1000 Farmers in Five Years".

1. "There is more in the man than there is in the land."
2. Investigate before you invest.
3. Adaptability is the farmers greatest idea. Be sure the place you buy and its location is adapted to the kind of farming you plan to do.
4. Find out if you probably have enough capital to carry through your plans before spending any of it.
5. Florida's climate and soils necessitate somewhat different methods and crops from those 'back home', but the basic principles are the same.
6. You can soon adapt yourself as others have done to these differences. Consult your County Agricultural Agent, or ONLY successful farmers in the same line in your community.
7. Produce all the food you can for home consumption. Have a vegetable garden, a cow, at least 25 hens; then your money crops.
8. Use the best bred seed, the best bred animals you can find.
9. Successful growers find it essential to use commercial fertilizers for profitable production.

10. Your brain work in farming here will be worth more dollars and cents than your brawn work.

11. Co-operate with your neighbors in production and in marketing, and identify yourself with community activities.

12. "Don't get behind with your fishing". In other words, engage in some recreational activity.

For The Orange and Grapefruit Grower

A grove requires five years to bring it into production. This can be done at a cost of approximately \$340 per acre. A citrus grower, living on his own grove and raising his own vegetables, poultry and milk, and doing his own work, can start profitably on 10 acres of bearing grove, of the proper varieties and located upon good citrus soil. His plans, however, should provide for the planting of additional trees. If he is contemplating starting and setting out a grove, sufficient capital should be available to carry out this program. High producing groves are usually sold too low, while low producing groves are usually sold too high.

The total annual expense for care of a full bearing grove varies from \$50 to \$100 per acre. Age, soil, type, variety, pest control, etc. affect this cost. Forty Orange County groves in 1930-31 season produced an average of 205 packed boxes of marketable fruit per acre.

In Orange County are located a number of independent marketing agencies, and five branches of the Florida Citrus Exchange (a Farmers Co-operative); a number of which are members of the Clearing House Association, whereby one is enabled to sell his fruit, (oranges, grapefruit and tangerines), or some of these firms will ship the fruit on consignment, to be sold on the regular fruit auctions in the large cities.

An advance of five points was registered in the index of the general level of prices of farm products from June 15 to July 15, according to the U. S. Bureau of Agricultural Economics. This resulted from a sharp upturn in prices of hogs, cattle, eggs, and cotton, and of minor advances in five other farm commodities.

Chemists Score Against Insects By Discovery of Rotenone Formula

Determination of the complete chemical structure of rotenone was announced recently by Dr. C. A. Browne, Assistant Chief of the Bureau of Chemistry and Soils, U. S. Department of Agriculture, who explained that chemists of the department hope that rotenone can be developed ultimately into the insecticide most nearly approaching the ideal.

With a knowledge of the structure of rotenone and associated compounds, said Doctor Browne, it will be possible to synthesize rotenone as a chemical product instead of being forced to extract it from vegetable sources. This new knowledge may also permit the synthesis of other compounds of analogous make-up which are likely to possess valuable insecticidal properties.

"Chemists of the bureau have been in keen competition with some of the best chemists in Japan and Germany," says Doctor Browne. "By solving this difficult problem ahead of those who started many years earlier, our chemists have earned credit for one of the most brilliant chemical achievements of the department."

Dr. F. B. LaForge, Dr. H. L. Haller and L. E. Smith were named by Doctor Browne as the scientists who accomplished this discovery. It is expected that further investigation will result in the production of insecticides which will be more effective in checking the ravages of insect pests which cause tremendous losses each year in this country.

Rotenone is a white crystalline material, and is both a contact insecticide and a stomach poison. It is more poisonous to aphids (soft-bodied plant lice) than is pure nicotine. It is also poisonous to fish and other cold-blooded animals, but appears to have no effect on humans and warm-blooded animals, a property which adds greatly to its usefulness. It can be obtained from the roots of *Derris elliptica*, an East Indian plant, and also from the roots of *Lonchocarpus nicou* or *cube* (pronounced coo-hay) from South America. This species of *derris* is a vine, and is a member of the pea family. *Cube* is a shrub-like plant resembling a small common locust tree.

If a feed shortage is likely plant cowpeas as soon as possible to insure plenty of hay.



MR. C. T. MELVIN

Vice-President of the Gulf Fertilizer Company, Tampa, Florida, who for the third consecutive time has been elected president of the Independent Fertilizer Manufacturers' Association, a group of fertilizer manufacturers banded together for the economical purchase of fertilizer materials. The Association has no other purpose and the discussion of any other problems is strictly forbidden. A purchasing organization is maintained in New York and in his capacity as president, Mr. Melvin is required to make frequent visits to that city.

Hogs marketed in early fall average from 2 to 3 cents a pound more than those marketed in December and January.

To most of us, constructive criticism is the kind that doesn't criticize.

Nursery Stock, Plant, And Seed Quarantine Regulations Modified

Changes in the regulations issued under Notice of Quarantine 37, the Nursery Stock, Plant, and Seed Quarantine, were announced August 12th by the Secretary of Agriculture. These changes, which become effective July 1, 1932, affect only Regulations 3 and 7 of this quarantine.

The changes in Regulations 3 involve a liberalization of the restrictions on the entry of mango seeds, and bulbs of the genus *Fritillaria*. The present regulations prohibit the entry of mango seeds from all countries on account of the danger of introducing with them the mango weevil (*Sternuchus mangiferae*). As the best information now available indicates that this insect is restricted to the countries bordering the Indian Ocean and to the Islands of the Pacific, and has not been recorded from any country of North, Central, or South America, or the West Indies, this prohibition has been modified to permit entry of mango seeds from the latter regions. At present only two species of the genus *Fritillaria* are permitted to enter. It is now proposed to admit all species of this genus. Provision is made for the importation for propagation uses of materials permitted entry for consumption purposes under the Fruit and Vegetable Quarantine 56; for cuttings, scions, and buds of fruits from the Orient, on account of the revocation of Quarantine 44, effective July 1, 1932, and for citrus seeds released from a prohibited status under Quarantine 19 on the same date.

A minor change has also been made in Regulation 7 to permit the entry of plants from Canada under Regulation 15 without the requirement of freedom from sand, soil, or earth.

It is advisable to feed dairy cows that are about to freshen a laxative feed.

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THE CAMERON & BARKLEY CO.

Tampa, Fla.

CITRUS COMMENTS

—BY—

Charles D. Kime, Orlando, Florida

This department is devoted to furthering horticultural interests of Florida. Letters of inquiry, discussion or criticism will be welcomed

Potash from American Sources

The actual development of potash sources at present as in the past depends on the final cost at which the material can be purchased by the user. It is to be expected therefore, that some sources that were in the process of being developed in the past are now abandoned and that they will not be reopened until such a time as market consumption has reduced the present surplus accumulations, and as a result of this that prices are stronger. The following information on potash consumption and potash sources is of interest as indicating possible further development of supplies when occasion should arise.

The percentages given for U. S. production of potash are variable from year to year and are therefore approximate only. Due to the great fluctuation in fertilizer consumption and price the last few years percentages are bound to be very inaccurate but they do show the trend of development.

The sources used are:

Mineral sources:

Alunite

Dust from Cement Mills

Dust from blast Furnaces

Kelp

Organic sources:

Molasses residues from Distilleries

Wood ashes

Waste liquors from beet-sugar refineries

Miscellaneous industrial wastes.

In one year's time the above sources have varied enormously in total percentages of the amounts produced. For example brines ran in 1916 about 41% of the total tonnage for the U. S. and in 1917 over 63% which is a big increase. Kelp at one time ran over 16% and probably this year will be zero percent. Alunite, dust from cement mills, waste liquors have all shown consistent increases. The above variation seems to point conclusively to one thing and that is that no source of American potash is in process of large scale development or is being run on a good paying basis at present. That is we do

not know at present if we can compete with foreign imports, with potash of our own production.

From the standpoint of supply of raw material from which potash can be obtained there are apparently two sources of importance. First, Natural Brines such as occur in Nebraska and in California and to a more unknown extent in Texas, etc. Second, Alunite and other potash bearing rocks and sands. These last are located in huge quantities in many parts of the U. S. scattered from the Eastern seaboard to the Rocky Mountains. Work is actually being done on the natural brines and a not inconsiderable amount of potash has been extracted therefrom each year. Work on extraction of potash from the low percentage materials as given under No. 2 above is progressing but still is in the formative stage.

Natural brines have supplied the largest amount of potash running as high as 41 percent of the total for the U. S. production. The principal sources have been Nebraska lakes and Searles Lake, Cal. In Nebraska there is an area of lakes lying between Alliance and Quincy. Very few have an acreage of over 600. They contain brine of varying degrees of strength. The bottoms of the lakes are usually mud and hardpan and underneath this is found a sand bed from 2 to 40 feet thick also saturated with brine. These lakes were worked by sinking a well into the lake bed and then pumping the brines to a plant for treatment. Both artificial heat and sun heat are used in the preliminary drying and concentrating of the brine. After passing through a series of such evaporators and vacuum pans the Brine is ready for the final drying which is usually done in rotary furnaces, heated by the direct blast of an oil flame. The final product is graded, ground and bagged for shipment. The cost of production is high when worked for potash alone and as the supply of high percentage brines is also limited, this source will not offer much competition in the market. The material however is highly alkaline

and is valuable for certain types of mixed fertilizer work.

Searles Lake in Southeastern California is a large valley carrying a salt encrusted floor varying in depth from 60 to 100 feet. On analysis of the salt an average of about 7.5% of K₂O was found as an anhydrous residue. This section is better known for its borax production than for potash. Plants erected in this section are capable of handling about 400,000 gallons of brine per day. The material after its preliminary concentration is shipped to a refinery where the crude salt is freed of borax and prepared for fertilizer trade.

In Utah alunite has been worked to some extent. This material contains about 9% K₂O. The rock is crushed to a small size, about 1 inch, and is then roasted with pulverized coal as fuel. The resulting calcined material is leached under about 60 lbs. pressure in closed steam tanks. The potash goes into solution as a sulphate and is separated from the tank of material by putting it thru a filter press and then concentrating the liquid through evaporators. The resulting material is the usual standard average in strength of potash, running about 48% of K₂O.

A low grade potash with a high lime content is secured from cement mills. The material as secured may run up to 10% and costs about 30 to 50 cents per unit to collect. The process is one of precipitating the flue dust and calls for an expensive equipment. However as such mills are often close to towns or farming communities they have to have precipitators in any event. The recovery of potash therefore becomes one of partly defraying the cost of dust prevention. If completely utilized 100,000 tons per year might be produced. However the actual production is still very low.

An objection to the cement kiln dust when used in mixed fertilizers in large quantities, is that the lime content will tend to release the ammonia from sulphate of ammonia and to free the nitrogen from other ni-

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IMPRESSIONS

By the Impressionist

We glean from a fruit publication that Brazilian orange growers are finding in their new orange wine industry an outlet for expanding production. Starting about three years ago orange wine was put on the market there; and it is declared to be obtaining a continually increasing popularity with the public. There is no record of the existence ever in Florida of a commercial orange wine industry; but plenty of old-timers can recall when home-made orange wine was a staple in most growers' households.

A New York firm of lime importers this summer is having considerable success with the sale of limes in a carton containing from 12 to 15 fruit. They are said to sell well through the chain stores.

Dr. A. C. Baker, U. S. D. A., well known in Florida during 1929, is in Texas watching the application in the citrus groves there of his new bait-spray, composed of molasses and nicotine sulphate, which is being used to combat the latest discovered infestations of the Mexican fruit fly.

One of the New York fruit auctions has been in operation for one hundred years; and everybody knows the first hundred years are the hardest.

Francis Q. Story died July 1 at his home in Alhambra, California, at the age of 87. He enjoyed the courtesy title of Father of Sunkist, having been president of the California Fruit Growers Exchange for sixteen years, from 1904 to 1920. He lived to see the Exchange's tonnage increase from an annual 2,000 cars to 85,000 carloads. It was during his administration that the Sunkist advertising program was formulated and first put into effect. He was one of the earliest commercial orange planters in California; and contributed much to establish the citrus industry there.

As this is written Coast publications are exercised over the collapse

of the Orange Prorating Pool which it was expected would control the shipment of California Valencias this Summer and Fall. The collapse was due to the withdrawal of the Mutual Orange Distributors and the Gold Buckle Association, with allegations of unfairness of the prorate. Our own experience in Florida with attempts to prorate citrus shipments is much akin to the experience of the Jewish rabbi in Lithuania, as told in Jacob Richman's book, when the paucity of donations from the congregation made it necessary to devise means to keep the good rabbi and his family from starving. It was agreed each member of the congregation should donate a full cup of wine. The rabbi then was to sell the wine for personal revenue. On the appointed night each emptied a cup of wine into a cask. Next morning the rabbi was shocked to find he had a cask of water. For every member logically thought that one glass of water in a whole barrel of wine would hardly affect taste or quality. So each and all had poured in water.

Now this paragraph is purely for masculine readers, some of whom may have been just as dumb as we and thus failed to understand all they know about that institution called A Wedding. We were bowling along the highway returning from Oviedo whither we had journeyed to be present at the wedding of George Morgan and Miss Nellie King.

"That was an awfully pretty wedding," said Friend Wife.

"Yeah", we responded, "but why do they always walk so slowly coming down the aisles?"

"Why so there will be the chance to see and note the bride's clothes, you goof!"

And, just to think, that was something which had puzzled us for years.

Of course, the only reason for interpolating the above paragraph in this column is that weddings and orange blossoms are so closely associated that the matter is one of citrus interest.

"For many years of distinguished service to the Florida National Guard,

and meritorious active combat service in command of both national guard and regular troops in the World war," Governor Carlton at Camp Foster near Jacksonville recently pinned the Florida military cross upon General A. H. Blanding, D. S. M., commander of the 31st division, in the presence of a notable military gathering and thousands of visitors. Thus the state's highest military award was bestowed upon one of our well known citrus figures, and most deservedly.

And it was a big relief to us. Advance publicity of the event stated the Florida Cross was to be bestowed upon General Blanding; and for the life of us the only Florida Cross we could bring to mind was the well known double-cross.

Out upon his speaking tour in behalf of the advertising campaign sponsored by the Clearing House J. C. (Jim) Morton is, as always, extremely interesting. We would rather listen to Jim Morton talk than to talk ourself; and that is saying a good deal. Notwithstanding the fact that personally we are in profound disagreement with the plans for the proposed campaign, we enjoyed every minute of his presentation of it recently before the Winter Park Kiwanis club. For one thing Jim's sincerity and earnestness were well worth the price of admission, which in this instance was free with a good supper thrown in gratis.

V. V. (Vic) Bowman that night introduced Jim Morton as, "a hit with the Hawaiians (pardon, Kiwanians) assembled". We'd like to say, on behalf of Billy Edwards, ourself and a few others, that such a combination is not so wholly impossible as C. Fred Ward, Forney Shepherd and a few other growers in that audience seemed to think.

When we pointed out that commodity advertising programs, as distinguished from specific brand advertising, have universally failed, it is no answer to say that there have been a lot of failures of brand advertising. The fact remains that Proctor & Gamble

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The Citrus Industry

with which is merged The Citrus Leaf
Exclusive publication of the Citrus Growers and Shippers

Address all Communications to the Main Office:
1123 Florida Avenue
Tampa, Florida

Telephone _____ 4819

Published Monthly by
ASSOCIATED PUBLICATIONS CORPORATION
Tampa, Florida

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Subscription \$1.00 Per Year In Advance

Entered as Second-class matter February 16, 1920, at the post office at Tampa, Florida, under Act of March 3, 1879.

Branch office and production plant, Bartow, Florida.

NEW YORK OFFICE:
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Edwin F. Ripley, Manager

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WIFE AND MOTHER

Mrs. Emma Frisbie, wife of the president and mother of the secretary-treasurer of the Associated Publications Corporation, publishers of this magazine, died in a Tampa hospital on July 28.

Deceased was a true and loving helpmeet, a loving and devoted mother. In her passing, husband and son sustain a loss which words are inadequate to express. In memory of her they have an inspiration which will continue while life shall last.

Peace—that peace which she so abundantly deserves—is hers.

GROVE PRACTICES

The Citrus Industry has said before, and because we believe it is a matter of vital importance to the citrus growers, we repeat that in the matter of grove practices, it pays to "make haste slowly."

For the past half century, certain grove practices, certain fertilizer formulas and programs, certain spray materials have been proven in actual grove practice to be adapted to the needs of citrus groves in Florida. These practices, formulas and programs have been demonstrated over a period of many years to be successful in promoting the growth and health of the trees and in producing fruit of fine quality and good appearance. To abandon these tried and proven practices for new programs of grove practice, simply because they are new, would seem to be the height of folly.

This does not mean that citrus growers should not be progressive; nor that they should refuse to experiment with new programs or new formulas which seem to promise success or to prove more economical than the old. But it does mean that such experiments should be con-

finied to small areas until they have been proven successful in actual grove practice over a period of years sufficient to demonstrate their worth.

A citrus grove is a valuable and costly piece of property. Once planted, it is a permanent thing and represents a permanent investment of many hundreds of dollars per acre. For this reason, the adoption of new practices, new formulas and new programs should be carried out on a limited scale until the success of such innovations has been demonstrated beyond question of doubt. The saving of a few dollars per acre per season, may well cost the grower dear in loss of permanent injury to trees which have required many years in the growing.

Changes in present practices doubtless will come. New formulas and new programs may be introduced which will prove better than those now in vogue. But in the search for something better or something cheaper than that which we now have, the wise grower will insist that proven practices shall prevail until such time as the new has proven its worth in actual grove practice over a sufficient period of time to demonstrate its successful adaptation to conditions existing in the Florida citrus field.

Even where new practices, new materials and new programs appear to bear the stamp of expert approval, we believe that it is the part of wisdom for the growers to wait until such time as thorough demonstration in actual grove work has established the adaptability of such methods before adopting them for their entire plantings or for any major part of their grove holdings.

A citrus grove is too valuable a property to play with. It should be cared for intelligently and with due regard to proven systems of management. We repeat that in the matter of adopting innovations in grove practices, it pays to "make haste slowly."

CITRUS ADVERTISING

Plans for the joint advertising of Florida citrus fruits by the Florida Citrus Growers Clearing House Association, the Florida Citrus Exchange and independent shippers outside either of these major organizations, are going forward.

James C. Morton of Auburndale, prominent citrus grower and always a tower of strength in the councils of the Clearing House Association, is touring the state to consolidate the sentiment of growers behind the plans being formulated for a nationwide campaign to popularize Florida citrus fruits. He is doing yeoman service and reports from the citrus belt indicate that he is meeting with uniformly gratifying results.

While the initial sum contemplated for the proposed advertising campaign is wholly inadequate, it will at least provide sufficient funds to demonstrate the practicability of joint advertising of Florida citrus fruits and should result in greater and more adequate campaigns in the years to come.

The Citrus Industry certainly hopes that the plans may materialize and that the national campaign may be inaugurated in time to have beneficial effects by the time the present season's crop is ready to move. Under present trying conditions the need of such an aggressive campaign is sorely needed.

Economic Factors In Citrus Diseases, Insect Control

By E. F. DeBusk

The amount of money spent annually by Florida citrus growers on citrus disease and insect control has been estimated at approximately \$2,000,000. Most of this is spent on direct control—spraying and dusting the tree. While there is room for improvement in the application of those direct control measures, and perhaps opportunity for increasing our annual spraying investment at a profit, indirect control measures should receive more attention. The successful and economical control of citrus diseases, and some insect pests, often depends more upon preventive and precautionary measures than upon direct control treatments. Many of our citrus disease troubles could have been avoided by exercising a little more care in selecting the grove site, rootstocks and varieties. But even after the grove is planted certain unfavorable conditions can be modified, bringing about more favorable environments for growing vigorous trees, trees more resistant to both disease invasion and insect attacks.

I am some times reminded that our citrus disease control methods are often too much on the order of taking headache powders for headaches. This is probably due to the fact that it is comparatively easy to demonstrate that a fungus disease can be checked, and often controlled, by spraying the tree with a fungicide. Then, too, there is a peculiar psychology that enters into the situation. People have heard a lot about spraying and some think it is a cure-all for the citrus tree troubles. They hear the spraying machines running in the community and catch the spirit of it, and want to spray. The advertising sells it. I have been called into groves for consultation and found the trees in a starved run-down condition, and the first thing the new grower wanted to know was the kind of spray to use and when to apply it. When I began to try to teach him that the soil conditions and soil management are the foundation of successful citrus production, the place to begin effective and economical disease control, he seemed inclined to change doctors and get one who prescribes headache powders.



E. F. DeBusk

Many of our citrus tree troubles or diseases are due directly or indirectly to soil conditions or soil management methods unfavorable to normal tree growth and fruit production. With this handicap, the grower often fails to correct the abnormal conditions showing up in his trees by spraying or applying some other direct treatment, instead of first going back to the soil and making an effort to bring about and maintain a soil condition more favorable to normal tree growth.

What I am trying to say is that we should begin at the foot of the ladder—get down to sound fundamentals in plant growth and fruit production—instead of going to the tree to try to correct a trouble that originates at the other extremity.

Melanose

Experience and observation lead to the conclusion that the first thing to do in economical control of the dreaded disease, melanose, is to go to the bottom and remove as far as practicable the indirect causes of the disease. Since dead wood in the tree

is the direct source of infection, an effort should be made to find out what is causing the dead wood, and to correct it.

Much of the dead wood in our trees is caused by root pruning, the result of deep ploughing, and improper cultivation. A common cause of dead wood is underfertilizing, resulting in weakened trees easily killed back by insects, diseases and low temperature. It must be borne in mind that a hungry tree is a feeble fighter. An inadequate supply of soil moisture during the dry season is the principal cause of dead wood in many of the old groves of the state. There are many conditions and cultural practices that result in dead wood in the trees. One dollar spent in correcting the unfavorable condition or practice that results in dead wood may prove more effective in the control of melanose than five or ten dollars spent on direct control by spraying and pruning.

I think I can make clearer what I am driving at by relating the experience of a certain grower. After fighting melanose for four years and making no progress, he began to take stock. Upon analyzing his grove conditions and practices it was found that he had fallen into a rut and was going around in a vicious circle, so to speak. His records showed that a January freeze had left his grove with much dead wood, and a heavy infection of melanose followed. He had never used bordeaux mixture in his grove, and had depended very largely upon scale fungi to keep the scale-insects under control. This sudden outbreak of melanose made him frantic and he rushed in and sprayed thoroughly with bordeaux mixture, after a rain had already fallen on the young fruit. Apparently he got very little control of melanose as the fruit had already become infected. The bordeaux killed off his scale fungi completely, the trunk and all parts of the tree above ground having been thoroughly sprayed. Scale-insects soon became very numerous and it was necessary to spray with oil emulsion twice within the first twelve months. This heavy oil spraying, together with the weakened condition of the trees from the freeze, resulted in much dead wood the following spring, in spite of the

fact that he kept pruning crews busy pruning out dead wood all the year. He followed the same procedure the second year. It was a dry spring and he got satisfactory control of melanose. The third year he followed the same program, even though he had a light crop of fruit. No profits were coming from the grove, and consequently the melanose spraying was omitted the fourth year. This happened to be a bad melanose year and his losses from the disease were heavy. Dead wood was still forming in the grove, even though he had pruned almost continuously. Some of the fruit showed ammoniation, and he had been persuaded to reduce the ammonia in his fertilizer mixture to two per cent. He had ploughed the grove every fall, and cultivated often over a period of seven months. Very light cover-crops were produced. When he began to analyze and study his conditions and practices he soon saw that he was on the wrong track for economical melanose control. It was evident that the root-pruning by deep ploughing and excessive cultivation not only contributed largely to the annual crop of dead twigs and branches but was responsible, in a large measure at least, for ammoniation of the fruit. The low nitrogen fertilization resulted in a weakened condition of the trees and rendered them more susceptible to disease and insect attack and cold injury. This added to the crop of dead wood, and consequently resulted in more melanose. The severe pruning further weakened the trees, increased the amount of dead wood, and only seemed to help defeat the melanose control program.

Attention was then directed toward improving the unfavorable conditions and practices. Deep ploughing was abandoned and two to three shallow cultivations were practiced. This permitted the production of more organic matter through cover-crops, and along with heavier fertilization, resulted in more vigorous trees and the production of less dead wood. This in turn reduced the amount of melanose to the point where it was no longer economical to spray for its control; the scale fungi were soon re-established in the grove, removing the necessity for regular oil sprayings; the production cost was reduced and the quality of trees and fruit improved.

It is not my intention to discourage either pruning or spraying for melanose control where the operation is likely to produce results. But I wish to call attention to the fact that the problem is often approached from the wrong angle. More atten-

tion should be given to maintaining vigorous trees. The old adage—"A stitch in time saves nine"—applies here, but the stitch must be made at the proper place. Close observation has brought out the fact that severe pruning of weakened trees during the months of July to November often result in an increase of melanose the following spring. It seems that the old dead branches pruned out at that time contain very few, if any, melanose spores and consequently do not constitute a potent source of melanose the following spring. On the other hand, severe pruning is weakening to a tree and is often followed by further dieing back of small branches. It is these branches and twig tips that die just prior to the setting of the young fruit that seem to be the most fertile source of melanose infection. The buttons left by the dropping of mature fruit in February and March are usually very productive of melanose spores during April and May following. Pruning for melanose control, to be effective, must consist in removing before the young fruit has set, wood that has been killed during late winter and early spring of the current season. Of course this is often very impracticable. Pruning out wood that has been dead more than five or six months apparently is not resulting in enough control to justify the expense.

If a grower finds that it is not practicable under certain conditions to control melanose by preventing the production of dead wood, the only alternative is to spray. Up to the present time, bordeaux mixture has proven to be the most effective fungicide for melanose control. It is used at a concentration of 3-3-50 to which oil emulsion is usually added at the rate of 3 to 5 quarts to the 100 gallons of bordeaux, as a spreader and, presumably to aid in scale control. Some prefer to leave out the oil, using casine as a spreader, as it is usually necessary anyway to follow with an oil spray in May or early June to control scale. The effectiveness of the bordeaux-oil spray depends upon the quality of material used, and the time and manner of application. A fresh, home-made bordeaux usually gives best results. In applying the spray, the primary aim should be to cover the young fruit with the fungicide to prevent the spores of the fungus from lodging on the surface of the fruit and causing the blemishes of the disease. This must be done after the fruit has set and before the spores have been carried from the dead wood on to the fruit by rain or heavy dew.

In spraying with bordeaux for melanose control it is desirable to leave the trunk and large limbs of the tree unsprayed, covering only the fruit-bearing surface of the tree. By so doing the scale fungi on the trunk and limbs of the tree will be preserved and will aid in the control of scale-insects.

Other Diseases

The same fundamental principle holds true in the successful and economical control of withertip, diplodia, gummosis, psorosis, and even foot rot. It seems that diplodia is often disseminated by pruning out small dead and diseased twigs while the disease is active. Every cut leaves an avenue for a new infection, right out among the infected twigs. These small cuts never receive the wound treatment. Until such time as we have more proof that these small dead twigs may become a potent source of melanose infection the second year, it seems that we might as well leave those that cannot be pruned out just before the crop is set until they become sufficiently brittle to be broken out by hand or decay and drop out. This practice does not encourage the spread of diplodia and results in the production of less dead wood over a period of years. Even large dead limbs should not be cut out unless the wounds are to be properly treated. Better to leave them to rot and fall out than to make new wounds and leave them untreated.

Gummosis and Psorosis

Very little is accomplished by direct treatment of gummosis or psorosis unless the soil condition and general grove management are first made more favorable for tree growth. An outbreak of one or both of these diseases is usually preceded by a condition that results in a severe shock to the individual tree. This shock may be the result of drought, water injury, under-fertilizing, low temperature, or other factors. Sometimes the first conspicuous symptom of either of the diseases is an abnormally heavy crop of fruit. Removing some of the fruit in its immature stage may prove to be an aid in checking and controlling the diseases.

Foot Rot

Soil moisture control and proper fertilizing are important factors in the successful treatment of foot rot. The root system of a tree affected with foot rot is more or less impaired in its functions and may be unable to take up a sufficient amount of water and plant food, under adverse conditions, to sustain top growth and fruiting. Such trees should first have special attention as to moisture supply and available

plant food, otherwise dying back of the top will result even before the advance stage of the disease is reached.

In old seedling groves where foot rot is more or less prevalent, it is a good practice to give the trees a foot bath once a year, using a strong Bordeaux mixture (6-9-50). This may be done with a power sprayer or a good barrel sprayer, using a nozzle that will throw a large stream, and sufficient pressure to drive the material well into the ground close up to the crown roots.

Surgical methods are very expensive and often ineffective in controlling foot rot. The root system of trees that have become weakened by foot rot may be greatly strengthened and the trees rejuvenated by banking with the grove soil to a height of 14 to 16 inches above the diseased area. A new root system (natural inarching) may be induced to develop within 3 to 5 years by this method.

Dieback

It is of decided economic importance to note that changes in cultural practices are throwing rays of hope on the control of some of our formerly serious citrus diseases, thought to be tied up with complex nutritional disorders. For example, exanthema (dieback) is becoming quite generally recognized as the result of excessive cultivation and under nourishment of trees.

Whitefly

The cost of citrus insect control may be greatly reduced by cooperating with nature. It has been actually demonstrated that whitefly can be controlled by spraying the trees at the proper time with cultures of red ashersonia, and by encouraging the development of the brown fungus, at a cost of 15 to 25 percent of that of controlling the insect by spraying with oil emulsion. The cultures may be applied with the regular grove power sprayer after it has been properly cleaned. By using double nozzles or brushes and arranging for the operators to ride, two rows may be sprayed with the cultures as rapidly as the machines can be drawn across the grove behind a tractor.

Scale-Insects

The problem of scale control in the bearing grove may be greatly simplified if the grower will only study his conditions and take advantage of the factors in natural control. The first and most important thing in the economical control of scale-insects, as well as most all insects, is to see that the trees are properly nourished. I must repeat: a hungry tree is a feeble fighter. This is true regardless of whether the attack is made by an in-

sect pest or diseased organisms.

Feeding citrus trees properly implies more than the application of so many pounds of a certain kind of fertilizer. Soil moisture and organic matter are two of the most important factors in proper tree nutrition. The value of a dense foliage on a citrus tree is recognized as a factor in natural control of insects as well as in the quality of the fruit produced. This quality of foliage can be brought about only by proper tree nutrition. A dense foliage presents a more favorable condition for the development of entomogenous fungi and consequently renders more efficient natural control of scale and whitefly and other insect pests. It affords protection to lady beetles and other predatory insects against birds and other enemies.

A fuller knowledge on the part of the grower as to what is actually taking place from time to time in the insect life on the tree, may enable him to save money on his pest control program. In the development of a purple scale infestation in a grove it has been noted that, at first the scale-insect develops more rapidly than its parasitic fungi. But later on when the scale infestation has reached the stage of weakening the tree appreciably and attracting the attention of the grower, the scale fungi, if examined, may be found to have developed to the point of placing the scale under control. The grower, in his excitement and anxiety to correct a condition in his trees brought on by the scale infestation, may resort to spraying after control of the pest has already been accomplished in the natural way. Experiences of this kind suggest the economic importance of closer cooperation with nature in insect pest control in the citrus grove.

The importance of thoroughness in spraying with oil emulsion cannot be over-emphasized. In too many cases the efficiency of an oil spraying, poorly done or applied at the wrong time, is so low that the losses from oil injury to the tree or fruit are greater than that which results from leaving the trees unsprayed. Do the job thoroughly or not at all. Under certain conditions an extra application of nitrogen at the critical time or an application of irrigation water may be used as a substitute for an oil spraying by holding up the resistance of the trees until the parasitic fungi can gain control.

Rust Mite

In economical rust mite control, the advantages of a heavy cover-crop, minimum cultivation, and a dense tree foliage are generally recognized.

Any one of these conditions is usually accompanied by less rust mite injury, other conditions being on a comparable basis, than where the conditions do not exist. It seems that any one of the conditions mentioned favors the development of the rust mite fungus, through the influence of a more humid atmosphere produced by moisture given off by the cover crop and foliage, resulting in more efficient natural control of the pest and consequently the necessity for less spraying or dusting.

Time will not permit continuing the discussion. I want to say in closing that, in our programs of citrus disease and insect control, timeliness is a very important economic factor. More attention should be given to diseases and insects before it is too late for economical control. Prevention should be the watchword. This implies the use of every economic factor in natural and indirect control.

CITRUS CANKER QUARANTINE MODIFIED

The lifting of the prohibition against the importation of citrus seeds will result from an order issued June 22 by the Secretary of Agriculture, revising Notice of Quarantine 19 issued on account of citrus canker and other citrus diseases. The revision, which becomes effective July 1, 1932, omits citrus seeds from the list of prohibited material, which previously included "all citrus nursery stock, including buds, scions, and seeds".

It has been established recently that seeds of citrus fruits, when freed from pulp, can be treated with hydrogen peroxide to eliminate the danger of introducing on them the citrus canker disease caused by *Bacterium citri*. It seems no longer necessary, therefore, to maintain a prohibitory quarantine against these seeds, and the present revision of Quarantine 19 is designed to release citrus seeds from a prohibited status, after which they will automatically come under the provisions of Quarantine 37, the Nursery Stock, Plant, and Seed Quarantine, and be allowed to enter in accordance with Regulations 3 and 9 of that quarantine. Under these regulations they may be imported under permit, at specified ports, if free from pulp, and subject to disinfection under Departmental supervision.

MISTAKEN IDENTITY

"Please, I would like to try on that rose colored dress in the window."

"I'm sorry, madam, but that's a lamp shade."—Selected.

Farm Efficiency Aid To Prosperity

A Sound National Agricultural Program and Efficiency on Individual Farms Will Aid Return of Prosperity.

Speaking before the Florida State Horticultural Society, Charles J. Brand, executive secretary and treasurer of the National Fertilizer Association of Washington, D. C., urged the adoption of a sound and efficient agricultural program both for the nation and for the individual farmer as a means of hastening the return of national prosperity.

"There never was a greater need for constructive thinking in connection with farm problems than there is today," said Mr. Brand. "And I refer not only to the individual farmer but to farm leaders, particularly those whose duty it is to shape our national policies.

"In the first place we need to adopt a definite policy on the use of land. We should admit that we have too much land under cultivation for our present needs and do something about it. Except as disclosed needs require, we should call a halt to spending money on unnecessary irrigation and drainage projects and begin to make plans for transferring large areas—several hundred million acres—of marginal farm land to reforestation, park and recreation projects. We should correct the long-taught fallacy that all land should be utilized either for growing crops, for grazing or for growing timber. There is no more reason for using all our land at any one time than there is for drilling all our oil lands, or opening all of our coal deposits. The present condition of the coal industry shows what economic disaster comes from over-development. Our new land policy, however, should protect our land resources in so far as it is practical to do so, in order that they may be available for future generations.

"Some means must be found for dealing effectively with exportable surpluses of stable farm products, and for relieving farm land from burdensome taxes. You cannot hide your land from the tax collector, and if you make improvements he is sure to see them also. The 1930 farm property tax was nearly \$800,000,000. The 1931 tax is probably similar and represents twice as much as the return from the whole wheat crop for 1931.

"Paragraphically stated, we need:

"1. A sound comprehensive national policy of land utilization and conservation. Erosion is washing away hundreds of millions of dollars worth of soil every year.

"2. More efficient and less costly marketing and distribution of farm products. The cooperative marketing associations, the Federal Farm Board and other agencies are helping toward this end, but 50 to 60 cent wheat cannot bear the freight cost that \$1.00 and \$1.50 wheat did.

"3. A business-like instrumentality that will enable us to dispose of our export surpluses with such orderliness that the one bushel of wheat in six or the one hog in ten that are normally exported will not be permitted to fix and determine the domestic sales price of the whole production.

"4. Last but not least, we must have a far more general adoption of 'better farming' with all that term

implies, particularly soil conservation and the intelligent use of modern plant foods and efficient machinery."

FLORIDA CHICKS GO BY AIR TO FOREIGN POINTS

Avon Park, Fla. — Several shipments of baby chicks by airplane to foreign countries were made this season by Englemann Poultry Farm located here. An order of 150 chicks went to Port of Spain, Trinidad, the latter part of June, and only three died enroute. A few days later 50 chicks were sent to the same place to fill another order.

About the middle July 300 chicks went to Kingston, Jamaica, and were reported in good condition on arrival. Besides other orders from these points, Mr. Englemann reports inquiries from Panama City and Bogota, Columbia.

Flower plants and shrubs should be watered late in the afternoon or early in the morning. If watered in midday, water is lost by evaporation, and drops of water adhering to the leaves may cause sunscald. Late afternoon watering is best.

Chaco

FERTILIZER

Time MUST Tell

Your money
cannot buy
better fertilizer
than Chaco.



BLUE GOOSE NEWS

Monthly News of American Fruit Growers Inc.



Edited by The Growers Service Department

VALUE OF TEAMWORK OF GROWER AND SHIPPER

By E. B. Lytle

NOTE: As the manager of the Weirsdale Packing Co. at Weirsdale, Dr. E. B. Lytle has made an outstanding record. He is one of the best known citrus figures in his section of the state; and the conclusions he draws here are the result of long personal experience.

The word cooperation has been so abundantly used in recent times that it has become somewhat trite. Also it has come to be employed with various shades of meaning. However there is no doubt in anyone's mind of what is meant by teamwork, so reference to teamwork between growers and shippers, and the necessity for such teamwork should be clearly understandable.

It was in 1929 we had a recent and most excellent example of the value of teamwork between growers and shippers in aiding to solve a major problem. Everything was running smoothly. Nowhere was there any apparent cause for uneasiness in Florida fruit circles. Then suddenly, almost overnight, the citrus industry of Florida was face to face with a real crisis. A most serious insect pest had invaded groves over a wide area. It threatened seriously the very existence of the industry.

And overnight growers and shippers forgot their differences, business or personal, if any in reality existed. They thought alike; they fought alike; they teamed together. The result was the extermination of a pest which in all the history of horticulture had not previously been conquered in any fruit growing area it had invaded. As a result Florida fruit was freed of a most deadly menace, and soon was again flowing through its regular channels to produce income again for those whose money was invested in the industry.

Had it not been for the highly successful teamwork then put forth by growers and shippers banded together for their common good, another, and quite different, chapter might have been written in this instance. On that occasion it was teamwork

(Continued on page 2)

BLUE GOOSE FLORIDA MEN TO MEET IN FALL

A statewide meeting of packing house men and executives of the American Fruit Growers Inc. in Florida is scheduled to be held sometime in September, probably about the middle of the month, which will be of vital interest to all concerned.

At that time R. B. Woolfolk, C. N. Williams and Allan W. Wilson will have returned from contacts with the trade in various northern markets, and the very latest developments in market centers will be available for the guidance of the Florida force in starting operations for next season's shipping.

These and other things which will be brought out, in addition to technical discussions of modernized packing house operations, promise to make the meeting of unusual interest, and of great value not only to the AFG men participating, but to each and every citrus grower in Florida served by this organization.

FRANK P. BEATY HURT IN AUTO ACCIDENT

Frank P. Beaty, Cocoa, long manager of the packing house of the American Fruit Growers Inc. at that point, and likewise manager of the Brevard Packing Co. at Mims, recently was the victim of an automobile accident while en route between those points, and at the time this is written is still confined in a Daytona Beach hospital as a result of injuries resulting therefrom.

Due to the seriousness of his injuries he has not been able to give an account of the accident. The truck left the highway and turned over, and Mr. Beaty was thrown violently for a considerable distance. He sustained a fracture of the skull and a severe concussion. No other traffic was passing at the time; and the accident was discovered some time later by the driver of a passing bus.

Physicians have described his condition as very good considering the severity of the injuries; and it is predicted that he should be sufficient-

REVOLUTIONIZING HANDLING OF SECOND GRADE FRUIT

Recognizing the need for improved methods of merchandising second grade Florida citrus fruits in northern markets the Florida Division of the American Fruit Growers Inc. has for a period of two years given much time and thought to the subject.

All resources of the organization have been called upon to contribute to the solution of the problem, with the result that recently plans have been perfected which promise to accomplish the desired results.

As whipped into final shape they have won instant and unstinted approval from executives to whom they have been submitted; and there is every prospect for enthusiastic approval by the entire countrywide sales organization under the AFG banner.

The plans have been developed in detail but will not be made public until after the statewide meeting in Orlando in September of packing house men and executives of the American Fruit Growers Inc. in Florida, who will have first opportunity to review the projected merchandising program.

"If the Blue Goose merchandising program was good, and the whole produce world admits its unusual success, this plan now put forward for second grade fruit is even better," was the statement of one expert after reviewing the projected new method and inspecting the material thus far developed for carrying it out.

Work is now going forward so that the new plan may go into effect with the beginning of next season's shipping; and it is confidently expected that it will obtain unusually successful results even within its first season of operation.

ly upon the road to recovery to permit his removal from the hospital by the time this account appears in print. His associates in the AFG organization subscribe to that hope; and are most sincere in their wishes for his prompt and full recovery.

Adm.

BLUE GOOSE NEWS

OF INTEREST to the citrus growers of Florida, each month, contained in four pages of paid advertising from the **AMERICAN FRUIT GROWERS INC.**

Florida Division
Sixth Floor, State Bank Bldg.
ORLANDO, FLORIDA



ARGUMENTS

William H. Baggs, vice-president and general manager of the national organization of the American Fruit Growers Inc. is both pithy and pungent. Some of his best utterances find their way into the bulletins to employees which are issued from his office at intervals. One such recent bulletin expresses a business philosophy which is typical of one of the busiest executives in the produce business. Being addressed, To Our Employees, it runs thusly:

"There are all kinds of opinions in the world. Each of us has his own—and each has a right to think as he pleases.

"But when we try to make others think just as WE do, arguments arise. And arguments, during working hours, hold up production, increase overhead and handicap every worker's work and progress.

"Let's avoid arguments and the penalty we all have to pay for them. In their place let's cultivate friendly attitudes, and benefit by the better records and results they produce all through the department.

"Here's one thing there can be no argument about: **ARGUMENTS NEVER PAY.**"

"Sincerely yours,"
(Signed) "William H. Baggs."

VALUE OF TEAMWORK OF GROWER AND SHIPPER (Continued from page 1)

which got the desired results, as it always will in worthy citrus, and oth-

Adv.

er, undertakings.

At this time we are not called upon to repel any important insect invasion, but there are numerous pressing problems confronting us which clamor for coordinated action, for grower-shipper teamwork, if you please. Why not employ the same sort of teamwork for the handling of these problems which has proven so successful in the industry's grapple with other issues?

Transportation for our fruit, a problem which has been very vexing while quantities of Florida citrus went to large distributing centers in competition with fruit from the Pacific Coast, continues to be vexatious.

Probably it would be going too far afield to make any prediction of the final outcome between auto-trucks and the railroads. It is a complicated situation.

That the movement of fruit by auto-truck has been of direct benefit to a great many growers, particularly during the past two seasons when aid was most needed, cannot be denied.

What of the future? Are we justified in believing that the benefits of cheap truck transportation will continue in the years that lie ahead?

Some thoughtful growers are taking the position that the continued movement of fruit by truck will mean the disintegration of important markets which previously have consumed our quality fruit. Probably it will be well enough to make no definite statement here as to the writer's own conjecture. The question is altogether too complex. However, it seems safe to assume that when the final chapter is written grower-shipper teamwork will be found to have played a most important part in its satisfactory solution.

Transportation is one of several items of major importance which need to be worked out carefully; and in connection therewith we need just the same sort of grower-shipper teamwork which was manifest in the emergency of 1929.

Now, a few bouquets for our own organization. One of the definite accomplishments of the American Fruit Growers Inc. in Florida is the handling of a line of trademarked fruit, of uniform quality grade and pack—a pleasing piece of goods that finds favor with both the fruit trade and the consuming public. This has not been brought about, or produced, by the American Fruit Growers Inc. alone. It is a result of successful teamwork between this selling organization and those growers it serves. It has been

made possible by a realization that it is to the everlasting benefit of all concerned that this practice be adhered to.

It is the writer's conviction that just in the proportion we can further develop teamwork between our own growers, our packing houses and sales department we shall further prosper and advance, and, incidentally, shall contribute most to the good of the industry.

Our only need is to make constant and conscientious use of what we have, with intelligent teamwork and broad understanding. The three greatest elements of business success are information, understanding, and teamwork. And the greatest of these is teamwork. Edgar Guest has summed it up in this poem:

TEAMWORK

It's all very well to have courage and skill,

And it's fine to be counted a star,
But the single deed with its touch of thrill

Doesn't tell us the man you are;
For there is no lone hand in this game we play,

We must work to a bigger scheme;
For the thing that counts in the world today

Is how do you pull with the team?
They may sound your praise and call you great,

They may single you out for fame,
But you must work with your running mate,

Or never you'll win the game.
For never the work of life is done
By the man with a selfish dream
For the battle is lost or the battle is won,

By the spirit of the team.

It's all very well to fight for fame,
But the cause is the bigger need,
And what you do for the good of the game

Counts more than the flash of speed;

It's the long, long haul and the dreary grind,

When the stars but faintly gleam,
And it's leaving all thought of self behind

That fashions a winning team.
You may think it fine to be praised for skill,

But the greater thing to do
Is to set your mind and to set your will

On the goal that's just in view;
It's helping your fellow man to score
When his chances hopeless seem,
It's forgetting self 'till the game is o'er

And fighting for the team.

IN AUGUST: Right now while Florida rests and prepares for next shipping season's activities, here is how the Blue Goose trademark is kept actively before the public by these non-competitive supplies for the family table. Here are the principal items under the Blue Goose trademark now before the trade and public: **Apples,** Duchess and Williams Early Reds from Virginia, West Virginia, Maryland and Pennsylvania; Gravensteins from Sonoma and Napa counties in California. **Peaches,** Elbertas from Georgia; Belles and Elbertas from the Carolina Sand Hills; and from the Far West Elbertas from the San Joaquin Valley, Lodi, Suisun and Vacaville, California. **Grapes:** Moore's Early and Concordes from the Missouri Ozarks, and Thompsons and Malagas from the Fresno, California, district. **Melons:** Imperial Valley Honeydews and Honeyballs from California, Perfectos from New Mexico and Texas. **Pears:** Bartletts from Sacramento River, Placer County, San Jose, Suisun, Vineburg, Napa, Contra Costa and Mendocino Counties in California, and Oregon Bartletts from the Medford district. **Lettuce:** Iceberg from Salinas, California. **Peas:** from Wenatchee district in Washington. Not to mention a wide variety of seasonable vegetables in lesser quantities from numerous other shipping districts.

SALES EXECUTIVES IN NORTHERN MARKET

R. B. Woolfolk, A. B. Michael and C. N. Williams are now in New York, where they went to attend the Apple Convention, August 9 to 12, the great mid-summer gathering of the fruit and produce trade from all sections of the country.

At that time, as is customary, William H. Baggs, general manager of the American Fruit Growers Inc., presided at a special meeting of executives and sales representatives of this organization who were in attendance upon the convention from many parts of the country. Discussion was had of the general business situation, and of selling problems now confronting the Blue Goose organization, together with discussion of crop prospects in the various fruit and vegetable producing sections.

Following a few days of business visits in the larger cities both Messrs. Woolfolk and Williams are expected to return shortly to Orlando, while Mr. Michael will stop off in North Carolina.

WHEN IS A SECRET NOT A SECRET, QUESTION?

When is a secret not a secret? Answer, when it is matrimonial. C. J. King Jr. of the sales department of the AFG organization in Orlando put one over nicely. But did he?

He departed for his annual vacation recently for the announced purpose of attending the Reserve Officers training camp at Fort McPherson, Georgia, in which organization he holds a commission. When he returned he brought a bride with him

to Orlando; and all this without a word to his friends here.

However, the well known Times-Union of Jacksonville a bit before his departure let the secret out by printing a photograph of the very attractive bride-to-be, who was a popular young lady of Jacksonville, together with other facts concerning the scheduled wedding. A copy fell into the hands of one of the men in the Orlando office. He read it; and then proceeded to pass it around. So when the intending groom departed there were two secrets — first, his own, as he thought, secret intentions; and, second, the secret of his secret intentions, possessed by every living soul on the sixth floor of the State Bank building in Orlando, for not a person indicated to the intending groom any knowledge of what impended.

BLUE GOOSE PUBLICITY IN SATURDAY EVENING POST

Under the heading of Solving the Blue Goose Mystery, the well known national weekly, the Saturday Evening Post in a recent issue devoted two full pages with illustrations to the now celebrated exploit of J. Dewey Soper, Canadian naturalist in locating the nesting place of the famous wild Blue Goose on Baffin Island in the Far North.

The story is much the same as that originally related in The Sphere of London, which was reprinted from that publication by the AFG Florida organization, thousands of copies of which were distributed at the Tampa Fair and at the Winter Haven Orange Festival two years ago. The pictures of the nesting Blue Goose, and of the nest with four eggs, are the

same as appeared in the article in The Sphere.

All of which would be of no particular interest except for the fact that through the association of ideas this story of the far famed "luck bird" of the Eskimos and Northern Indians becomes a very splendid boost for the equally famed, and far wider known, Blue Goose trademark of the American Fruit Growers Inc., the world's best known and internationally advertised mark of excellence for fresh fruits and vegetables.

"BLUE GOOSE" JOHNSON WINNING NEW LAURELS

Harry E. Johnson, the well known Haines City citrus grower, who in trap-shooting circles is widely known as "Blue Goose" Johnson because of the big white sweater with the Blue Goose thereon which he wears; is out winning new laurels this summer on the round of trap-shooting events.

At Louisville on July 20 he shot his way through a big field of experts to win for the second time the annual Blue Grass Championship. In this shoot he scored 491 out of a possible 500. He won a \$450 cup, which becomes the permanent possession of the state which wins it three times.

Earlier he also won the well known Brown Hotel shoot; and thus was the big figure at the Blue Grass meeting. Undoubtedly he will be heard from further as the season progresses, and news drifts in of the outcome of the various summer trap events, for Harry E. Johnson ranks as one of the very foremost shotgun experts among the amateurs of the United States. In other words he possesses real Blue Goose quality at the traps.



It's GOOD BUSINESS to tie up with this SYMBOL

It is the highest emblem of quality of the American Fruit Growers Inc.

Growers who market their crops through this great national sales organization recognize that Blue Goose reputation brings a warmer welcome in consuming markets, and this ready acceptance leads to better average prices.

The buying trade has learned that the Blue Goose is its best assurance of reliable supplies of dependable products, and that for these products there is a waiting consumer demand.

No matter what your acreage there is nothing to be lost and the possibility of much to be gained by investigating fully what AFG service and the Blue Goose trademark can do for you.

Why not get in touch with this office, or the nearest of the forty Blue Goose packing houses in Florida, today?

American Fruit Growers Inc.

Florida Division
Orlando, Florida

AVOCADO CONTROL MODIFIED

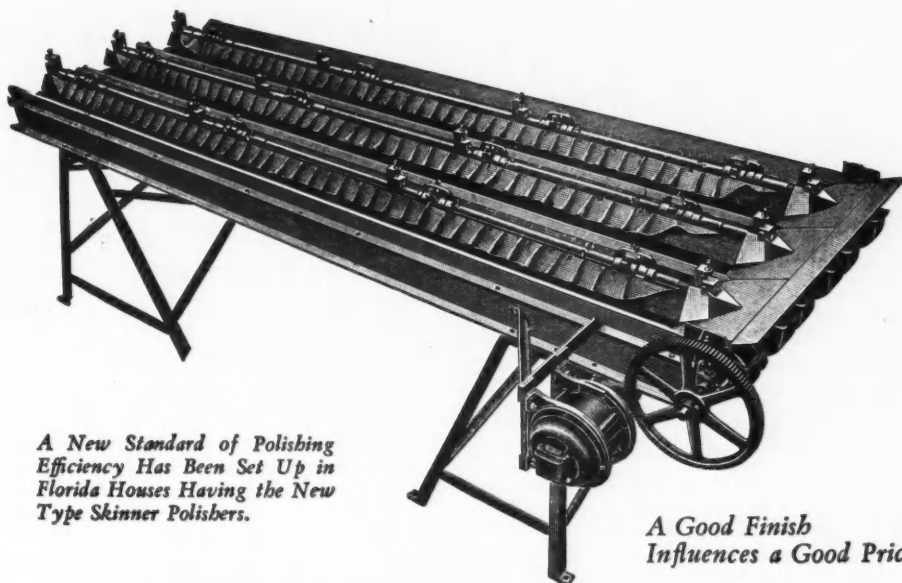
The Secretary of Agriculture announces that, effective July 1, 1932, the restrictions at present imposed on the entry of avocado fruit and avocado nursery stock from Mexico and the countries of Central America under the Order Covering Admission of the Avocado or Alligator Pear under Restriction, and the regulations issued thereunder, in 1914, will be enforced

under the Fruit and Vegetable Quarantine (No. 56) and the Nursery Stock, Plant, and Seed Quarantine (No. 37), respectively.

The avocado fruit order was promulgated several years prior to the establishment of either the general Nursery Stock, Plant, and Seed Quarantine (No. 37) or the Fruit and Vegetable Quarantine (No. 56), and was designed to prevent the introduction into this country of the

avocado weevil from Mexico and the countries of Central America. However, after some years of experience with these two quarantines, it appears that these measures have so well proved their value as a means of protection against foreign insects and diseases that continuance of the special avocado order and regulations is unnecessary. The department is convinced that the protection afforded by

(Continued on page 23.)



A New Standard of Polishing Efficiency Has Been Set Up in Florida Houses Having the New Type Skinner Polishers.

A Good Finish Influences a Good Price

The Skinner All-Steel Polisher

The polisher is the machine that gives the final touch to your fruit before it goes to market. Upon the shine and finish depend the price it will bring. A poor finish defeats good grove management and a fair return becomes impossible because an old obsolete polisher puts a second grade shine on a first class fruit.

They buy by the eye—if you don't believe it watch a bunch of women doing their Sunday shopping. They will tarry long and buy much where the fruits and vegetables are fresh, crisp and appetizing.

The Skinner All-Steel Polisher is the finest polisher Skinner has yet produced, being a combination of nearly a quarter of a century of polisher building to meet Florida conditions.

Packers thinking of replacing old equipment with new will be impressed by the type of work the Skinner Polisher is performing in the houses of many Florida packers. Ask the man who owns one.

FLORIDA CITRUS MACHINERY COMPANY

DIVISION FOOD MACHINERY CORPORATION

B. C. SKINNER, Pres.

DUNEDIN, FLORIDA

What The Perrine Lemon May Mean To Florida

By David C. Barrow, President,
DeSoto Nurseries, DeSoto
City, Fla.

Up to the present, lemon growing has been a minor factor in the horticulture of Florida, on account of the fact that Florida lemons grow too big and coarse by the time they are mature. In California and Sicily where our commercial lemons come from, lemons are picked by size, usually green, and cured to the proper color in a curing room before shipment. This has been impossible in Florida because our lemons upon reaching the commercial size, are too green and do not have the juice content, nor flavor. Physiologists and experts of the U. S. Department of Agriculture have for more than 20 years given serious thought to finding a remedy for this situation, and have made many crosses, and produced many hybrids, in an effort to create a good, juicy, thin skinned, commercial lemon for Florida.

They have finally succeeded and its name is the Perrine Lemon, which is a cross between the Genoa lemon and the Key (Mexican) lime, the latter being the female parent.

This hybrid or lemon-lime now officially termed the Perrine Lemon possesses some outstanding qualities. In size, shape, color, flavor and juice content, it measures up to the imported commercial Sicilian lemon sold in stores all over Florida.

It is immune to lime wither-tip, and is also immune to lemon scab, two of the worst diseases that attack limes and lemons under Florida conditions, and it is the only lemon in Florida of which I have knowledge that is free from these dreaded diseases.

The tree is much more hardy than the lime and also hardier than the common lemon, and is more or less everbearing, having ripe fruit, fruit in all stages of development, and flowers in bloom all at the same time. Juice is developed while the fruit is still green and immature, and when mature the fruit drops to the ground; two qualities inherited from the lime.

The tree is evergreen, vigorous, productive, and precocious; of rather compact habit, leaves unifoliate, large (3 to 5 inches in length), pointed oval, with short wingless petiole.

Fruit is 2 3-4 to 3 inches in length by 2 1-4 to 2 3-4 inches in diameter, having small lemon nipple, color pale

lemon yellow, with thin smooth skin slightly corrugated; 10 to 12 segments with thin walls; pulp very juicy of pale greenish yellow color; flavor more like lemon than lime, sharply acid, with no "off flavor", and usually 4 to 6 seeds. Every home owner in Florida should have a few yard trees for home use and save sending Florida money away. The Perrine lemon offers possibilities for supplying nearby markets. We will have a large supply of budded stock for December delivery.

CITRUS COMMENTS

(Continued from page 9)

trogen bearing materials, the nitrogen being lost as a gas. In addition to this loss there is supposedly some reversion of the soluble phosphates from the soluble form into the insoluble form where acid phosphate (super phosphate) is used. The phosphate changes from the mono and di calcium phosphate form into the tri calcium form and becomes progressively less soluble in so doing. The cement kiln dust is also low in K₂O and could be used only in low percentage formulas. It would make a good material for separate applications where an alkaline reaction is desired.

Other brine sources than the ones mentioned are Salduro salt marsh in Utah and Great Salt Lake. In the first location the brine lies below the surface salt mass in the subsoil mud where it is easily pumped. The supply is very large and extensive but the percent of K₂O is low running about 4.5%. The success in refining such material will depend on the difficulty of removing the excessively high percentages of undesirable

salts. In the Great Salt Lake section the product is mostly sodium chloride and the potash is secured from the spent liquors from some other process of refining the salt. Unless areas of the lake can be found where the K₂O content is higher the location would seem to offer no competition as a potash producing section.

Kelp has been used for some time as a very fine source of K₂O. The unit cost is too high to be considered in fertilizing work. It does however offer a continuous source of small volume for high grade products.

Molasses residues, waste liquors from other industrial plants will continue to be developed into by-product potash. These sources rank lower in unit cost than by-product sulphate of ammonia and are produced for the same reason. They offer an additional source of income to the industry where they are collected and marketed. Sugar and potash do not seem to be at all analogous but both can be produced by the same plant. The total amount of potash from this source will not prove impressive nor will it ever offer serious competition as it can never be large.

Ashes of various plants offer additional sources of valuable potash. Canadian wood ashes have long been a staple form of calcium and potash for the trucker and the farmer or fruit grower. This supply has been largely exhausted so that less valuable forms have appeared on the market. Cotton seed hulls offer a small amount of ash and a small amount is still obtained from burning hardwoods. This source however is diminishing and no substitute is in sight.

The last remaining source so far discovered in the U. S. is the most difficult one to work. It covers every section of the U. S. to some extent. Such statements as the following are

Conditioned 200 Mesh

Acme Dusting Sulphur

Free Flowing - Non Lumping - Non Caking

Don't Rely on Sulphur of Unknown Fineness If You Want Results

RUST BRAND

Tests 99% Passing 200 Mesh - 97½% Pure

Southern Acid & Sulphur Co., Inc., St. Louis, Mo.
R. W. A. Duncan, State Repres., Frostproof, Fla.

common; "A recent survey indicates that States in Georgia, potash bearing minerals in New Mexico, leucite-bearing rocks of Wyoming, alunite from Utah, silicates and green sand and feldspar from the Carolinas and other sources of potash bearing rocks offer a supply of potash sufficient to fill all our needs for many generations." These surveys are true. The potash is there. But it must be extracted economically. It must be able to compete with imports from Europe. The actual literature that has accumulated from past efforts being made to extract potash from our native rocks and sands is voluminous. Some of the processes are extremely interesting and plausible but so far none of them offer an economic possibility. We have the potash, millions and millions of tons of it, but it is unavailable. Whoever is successful in commercializing a potash extraction process that will release this source of plant food for our use, will have an untouched field in which to work and develop another American Industry.

Production of Potash in 1930

Potash produced in the United States in 1930 amounted to 105,810 short tons of potassium salts equivalent to 61,270 short tons of potash (K₂O), according to the United States Bureau of Mines, Department of Commerce. Sales by producers amount to 98,280 tons of potassium salts with an equivalent of 56,610 tons of (K₂O). The potash materials of domestic origin, sold by producers in 1930, were valued at \$2,986,157 f. o. b. plants. About 20,550 tons of potassium salts with an available content of 10,800 tons of (K₂O) remained in producers' stocks December 31, 1930. The output decreased 2 per cent in gross weight with a decrease of less than 1 per cent of K₂O content. The sales of salts decreased 3 per cent with a decrease of 1.6 per cent K₂O content. The total value of the sales decreased less than 1 per cent. More crude salts remained in the hands of producers at the end of 1930 than at the end of 1929. The production was chiefly from natural brines in California and distillery residue from molasses in Maryland. Alunite was shipped from Sulphur, Nevada, to California, ground and sold as fertilizer, and a small amount was also produced at Marysville, Utah, for use in experiment work. Cotton seed ash was also sold as a fertilizer based on its content of water soluble K₂O.

Imports

The potassium salts imported for consumption into the United States in 1930, according to the Bureau of

Foreign and Domestic Commerce, amounted to 978,974 short tons. The estimated K₂O equivalent of these imports is 342,071 short tons. This represents an increase of 5 per cent in gross weight over the per cent more than 1929. The potassium salts imported chiefly for fertilizer amount to 933,324 short tons (K₂O content approximately 322,000 tons) valued at \$19,905,069. This was an increase of 7 per cent in total quantity and 13 per cent in value.

The potassium salts imported for the chemical industry amounted to 45,650 short tons (K₂O) content approximately 20,071 tons, valued at

\$4,573,018, a decrease of 23 per cent in total quantity, and of 24 per cent in value.

Exports

The exports of potassium salts amounted to 1,256 short tons of potassium compounds (not fertilizer) valued at \$498,774 and 17,042 short tons of potash fertilizer material valued at \$643,367. These figures represent a decrease from 1929 of 17.5 per cent in quantity and 14.5 per cent in value for potassium salts (not fertilizer) and an increase of value of potash fertilizer material 10 per cent in both quantity and shipped.

UNSATISFACTORY SUBSTITUTES

*They invariably
Cost You More*



During economic depressions it is only natural for growers to attempt to economize on fertilizer. Experience has proved, however, that this is not always a good practice. It has often proved to be a "false economy" that handicapped the future crops and made for a greater expense in the end than quality fertilizer. Economic conditions do not change the food requirements of citrus trees and other crops. Such conditions really emphasize the importance of giving crops a balanced ration of plant-food. And remember—in addition to using "balanced fertilizer"—your selection should be based on the time-tested quality of a fertilizer manufactured especially to suit the requirements of Florida crops and soils.

Because of the demonstrated value of all standard brands of Armour's BIG CROP Fertilizers they are relied upon by thousands of growers in every part of Florida. For more than 37 years they have proved their quality making ability and have helped growers keep their profits consistent with the reward of proper fertilization. Armour's BIG CROP Fertilizers are a safe protection against unsatisfactory substitutes.



Our field representatives will gladly make recommendations based on the requirements of your crops.

**ARMOUR'S
BIG CROP
FERTILIZERS**
ARMOUR FERTILIZER WORKS
JACKSONVILLE, FLORIDA

INTERSTATE COMMERCE COMMISSION ANNOUNCES IMPORTANT HEARING

The Interstate Commerce Commission has set for hearing in Washington, D. C. on September 12th at 10 A. M. in the office of the Commission the complaint of the Growers and Shippers League of Florida vs. the Atlantic Coast Line R. R. et al. to be heard by Examiner Weems.

This complaint involves the rates on citrus fruit from Florida to New England destinations. The League is claiming in behalf of the growers and shippers of Florida that the railroads did not correctly follow the order of the Commission in their decision rendered in Docket 16939, rendered in July 1928.

It appears that the Commission prescribed a certain formula for arriving at the future rates for citrus when the basis was changed from a charge in cents per box to a cents per 100 lbs. basis. When the railroads published their rates on the hundred pounds basis in presumed compliance with the Commission's order it is alleged in the complaint they published the same rates to larger groups of destinations in New England territory than was justified by the Commission's order. This resulted, according to complainants, in higher rates being applied to certain destinations than justified under the Commission's order. Reparation has been claimed for overcharges to growers on shipments made within two years prior to the filing of the complaint.

C. R. Marshall, Commerce Counsel of Washington, D. C. will represent the League as counsel.

FRUIT AND VEGETABLE AUCTION SALES INCREASE

Fruit and vegetable auction sales have been increasing in recent years. Auction houses in twelve leading consumption markets sold 127,235 carloads of fruits and vegetables in 1924; in 1930 they sold 156,974 carloads, according to the U. S. Department of Agriculture. Fruit and vegetable auctions at shipping points, also, have been increasing in popularity in recent years.

The Bureau of Agricultural Economics finds that fruit and vegetable auctions in thirteen city markets in 1930 sold 61,293 cars of deciduous fruits, 54,643 cars of citrus fruits, 28,762 cars of bananas, 10,740 cars of melons, vegetables and miscellaneous products, and 3,624 cars of pineapples. Of the total quantity thus

sold, approximately 120,000 cars were of domestic origin, and comprised about 11 per cent of our total carlot shipments of fresh fruits and vegetables in that year.

Auction sales in New York totalled 79,454 cars of fruits and vegetables in 1930. Philadelphia was next in importance as an auction market, with 21,290 cars; Chicago, 15,343 cars, and Boston, 11,405 cars. Other auction markets were operated in 1930 at Baltimore, Cincinnati, Cleveland, Detroit, Minneapolis, Pittsburgh, St. Louis, St. Paul, and New Orleans. Fifty-six different commodities ranging from anise to watermelons were sold on the New York auctions in 1930. The commodities included broccoli, garlic and horseradish, cocoanuts and escarole, chicory and artichokes, mustard green and loquats, peas and bananas. The 56 different commodities came from 25 States, Porto Rico, and several foreign countries.

Vegetable seed should be soaked in 1-1,000 corrosive sublimate before they are planted to prevent seed-borne diseases.

STATE DAIRYMEN ADOPT IMPORTANT RESOLUTIONS AND ELECT OFFICERS

Gainesville, Fla.—Adopting important resolutions and electing officers, the Florida State Dairymen's Association held its annual meeting here recently in connection with Farmers' Week.

A resolution recommending that all state dairy barn inspections be done by the State Board of Health, after a lengthy, fiery discussion was passed. A resolution to the effect that milk inspection shall include all those who sell liquid milk was easily carried, as was one endorsing free tubercular testing of cattle by the state. A resolution for the adoption of a uniform building code for Florida dairies was defeated.

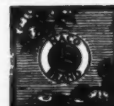
J. M. Whitehurst, Tampa, was re-elected president, S. I. Sneller, Jacksonville, was chosen vice-president, and M. F. Brown, Tampa, was made secretary-treasurer. W. J. Nolan, Jacksonville, E. P. Nowlin, Pensacola, and Guy Wachtstetter, Hollywood, were chosen as directors.

DO YOU HAVE TO MAKE EXCUSES for YOUR GROVE?

NACO groves throughout Florida are fine examples of the soundness of the NACO PLAN of fertilizing. Their owners show them with pride...and without having to make excuses.

No argument on paper can be so convincing as visible results. So ask to be shown the NACO fertilized groves in your territory. Write for a list of NACO Brand users near you, or for the name of a NACO representative who will be glad to take you to see NACO groves and to talk with their owners.

NITRATE AGENCIES COMPANY
1401-1407 LYNCH BUILDING
JACKSONVILLE, FLORIDA



AVOCADO CONTROL MODIFIED

(Continued from page 19.)

that order and its regulations can be assured equally well by the present provisions of these quarantines.

Consequently, the Avocado Fruit Order of 1914 and the regulations issued thereunder have been lifted effective July 1, 1932. As indicated, the

entry of the fruit of the avocado will fall automatically under the provisions of Quarantine 56 while avocado nursery stock will similarly revert to Quarantine 37.

The Avocado Seed Quarantine (No. 12), prohibiting the importation of avocado seeds from Mexico and the countries of Central America, is not

affected by the revocation of the Avocado Fruit Order and will continue in force.

Treating the seedbed with ammonium sulphate and sodium cyanide will kill root-knot nematodes and ants.



They Buy by the Eye

Oranges and Grapefruit must be attractive and look appetizing if they are to move out of the dealer's stock. Any visible evidence of decay, any apparent aging or wilt, even a dullness of the shine—all have a marked influence in slowing up sales.

Because appearance is the most important thing to consider, the dealer has come to prefer Brogdexed fruit because it stays sound, does not wilt and retains its polish and fresh appearance until the last piece is sold. He knows, too, that in the hands of his customers the fruit will stand up until finally consumed.

That is the kind of service Brogdex gives from the grower to the consumer, at the same time safeguarding the interests of all parties concerned—shipper, railroads, seller and the buyer.

And because of these outstanding advantages of Brogdex in the market, there has developed a strong sentiment among buyers that shippers should protect the market against loss by using the Brogdex System of rot and shrinkage control. Some have even come to the point where they will buy no other kind.

Before contracting for your fruit another year talk to a Brogdex packer—there is one near you.

E. C. Fitz & Co., Boston—It has been our experience that Brogdexed fruit arrives in better condition, holds this condition over a far longer period than untreated fruit, looks fresher, makes a more attractive display and is therefore more tempting to the buyer. We believe the cost of the treatment is fully warranted and that there should be a law passed compelling all fruit to be Brogdexed.

Sweeney, Lynes & Co., Boston—We find that Brogdexed fruit arrives here in better shape and holds up much longer than the car that is not treated. It looks better and really is better in more ways than one. We always emphasize the fact when we are selling fruit that has been Brogdexed and there is no question in our minds but what it brings much more because of this Brogdexing.

F. Ankenbauer & Sons, Cincinnati—We are boosters for Brogdexed fruit as it keeps better, looks better and satisfies the trade, thereby making better profit and more satisfied customers.

S. Weitz & Son, Cleveland—Brogdexed fruit arrives in much better condition, has much better appearance in the store, holds

up much better in the dealer's hands and owing to these facts is worth much more from a selling standpoint.

National Fruit & Produce Co., Buffalo—Brogdexing gives the fruit a much better appearance and helps preserve and keep the fruit in good, healthy condition.

Schmidt-Johnson Co., Milwaukee—Brogdexed fruit arrives in better shape, puts up a better appearance, holds up much longer in the hands of the dealer, and is worth considerably more from a selling standpoint.

The C. H. Cross Co., Chicago—Brogdexed fruit invariably arrives in better shape and keeps better than other fruit. We are very much in favor of it and believe the cost is a very small item as compared with the net results.

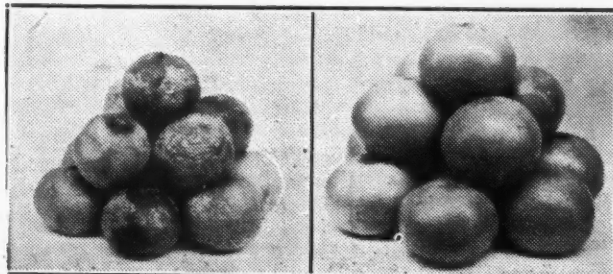
Canadian Fruit Distributors, Regina, Sask.—It has been our observation that Brogdexed fruit arrives in better condition and maintains a better appearance on the sales floor and even on the fruit stands. This seems to be the opinion also of the leading fruit jobbers in this territory.

"More money for the same fruit is just a question of making it look better and keep longer"

These grapefruit were picked Oct. 10 and photographed Jan. 21. All were originally the same size. The lot at the right was Brogdexed. The lot at the left was not. Fruit was kept at room temperature during the 101 days.

Florida Brogdex Distributors, Inc.

B. C. SKINNER, Pres. — DUNEDIN, FLA.



CULTIVATION, COVER CROPS AND MULCHING OF CITRUS (Continued from page 5)

muck in addition to the regular mulching. For over a year there was no noticeable difference between these tracts and adjoining ones which had not had any muck, but this winter there has been a decidedly better growth on these tracts for which I can account in no other way.

The fire hazard is something which has to be considered in a discussion of mulching. With us, there is sufficient green cover crop growing practically the year round to prevent any fires spreading, but in some cases piling all this inflammable matter around the trees might be decidedly risky. There are very few grove practices which can be applied to all groves in Florida without first considering the effect of local conditions, and mulching is no exception to the rule.

Parts of our grove are so heavily sodded with Bermuda grass that we have never been able to get any other growth established. However, this has not been the unmitigated nuisance under the mulch method that it was under clean cultivation. Bermuda will not stand smothering and a good heavy mulching will keep it under control for a year with very little attention. We mow the grass whenever it gets thick enough to justify it and rake it around the trees to supplement the mulch already there. The thicker the grass, the more mulch it makes to prevent its own growth around the trees. On parts where Bermuda has not taken the ground to the exclusion of everything else, *Crotalaria* has been the best cover crop tried. So far, the *Striata* seems better suited to our conditions, and while it has not re-seeded quite as well as we had hoped, on account of a small worm which destroys the seed before maturity, its habit of continuing to grow for several years in spite of repeated mowings has been a pleasant surprise. Our method is to mow rather frequently, but not cut it too low, and with this treatment it continues to grow and pumpkin bugs have never been a problem.

Cultivation with us depends upon the size of the trees, type of soil and amount of mulch around the trees. It is evident that a heavy mulch will keep down the weeds and grass around the trees much better than a light mulch, and correspondingly reduce the amount of cultivation necessary. What cultivation is done is in the form of light hoeings, from once to three times a year, depending upon conditions. If rains are normal during fertilization, the fertilizer is

THE CITRUS INDUSTRY

NEVINS CITRUS CASE DECISION REVERSED

The Interstate Commerce Commission has just reversed its decision in the important Nevins Citrus Case, Docket 22754, according to advice received by the Growers & Shippers League of Florida.

The decision was originally handed down by the Interstate Commerce Commission on April 15, 1931, in which they authorized reductions ranging from \$3.24 to \$6.48 per car on citrus fruit from points on the East Coast Railway in Florida to destinations in Eastern Trunk Line territory and authorized the railroads to refund overcharges that had been assessed.

The carriers appealed the case seeking reconsideration and the Commission has just reversed its previous

scattered over the mulch and rained. If weather is dry, mulch is loosened up with a rake to permit the fertilizer to sift through to the ground.

It is rather hard properly to value a grove practice during an abnormal season. A grower has to be particularly on his guard or he will know something which is not so. It seems that abnormally dry weather is now normal Florida weather, and what a tree would do if it got an occasional good rain is hard say—probably die from the shock—but from what data I have I consider the best practice for all weather conditions to be all the mulch and cover crops you can get and as little cultivation as you can get by with.

August, 1932

decision which granted reparation.

This case will be a keen disappointment to the growers located on the Florida East Coast Railway because it approves the movement of traffic via the shorter line of haul and the assessment of rates via the longer mileage.

In 1925 the Florida East Coast Railway completed and placed in operation a section of their line, known as the Moultrie cut-off extending approximately 29 miles from a connection with its main line at St. Augustine, Florida southward to a connection with its main line at or near Bunnell, Florida. The construction of this cut-off reduced the main-line mileage 19.4 miles for through traffic.

At the time a bill was introduced in the State legislature providing for the application of rates on intra-state traffic via the longer haul while the traffic might actually be moved via shorter line. This Bill was opposed by representatives of the Growers & Shippers League of Florida and others, but finally became a law under which intra-state traffic is now governed.

The establishment of this law has now apparently influenced the Commission in the application of Interstate rates as well as on intra-state traffic.

Ten years ago total carload shipments of fresh fruits and vegetables by rail and boat in the U. S. A. amounted to 858,669. Last year it amounted to 1,021,474 carloads, with whatever tonnage moved by motor truck to be added.

"Black Leaf 40"

Kills APHIS and THRIPS

This "double acting" insecticide has been the favorite spray material of successful citrus growers for the past 20 years. It not only kills Aphis and Thrips by direct contact, but also by nicotine fumes. This is an advantage not possessed by any non-poisonous, non-volatile insecticide.

Recommended By Experiment Stations
"Black Leaf 40" enjoys the endorsement and recommendation of leading growers, Agricultural Colleges and Experiment Stations and editorial writers throughout the country. Being highly concentrated, this reliable insecticide is economical to use as a little goes a long way. Full directions appear on every package. Sold everywhere.

Tobacco By - Products & Chemical Corporation
LOUISVILLE Incorporated KENTUCKY

KILLS BY CONTACT AND FUMES



IMPRESSIONS

(Continued from page 9)

continue to spend well over three hundred thousand dollars each and every month of the year over a period of years, long after various commodity campaigns have come, gone broke and departed, and they do it solely because it pays. Who doesn't know their Ivory soap? Theirs is but one of thousands of instances of the success of brand advertising on large scale or small scale.

The proponents of any commodity advertising program ought to be able to point out just one single success of commodity advertising. To any one who knows the advertising field it does not suffice for the "Say It With Flowers" campaign to be thus cited. That campaign in its original form was just another commodity advertising flivver. It was then revamped, and as a form of definite brand advertising is now continued by five thousand of the thirty thousand florists of the United States. These five thousand comprise the Florists Telegraphic Delivery. On their windows, as in their advertisements, appears their trademark of a circle with a flying Mercury and the words "Bonded member F.T.D." which means they are safe agencies for the

THE CITRUS INDUSTRY

public's telegraphed floral offerings.

No one will for a moment question the sincerity or the good intent of the Floridians who are boosting for this proposed campaign for "Florida oranges". Nor can any progressive business man question the desirability of more and better advertising for Florida citrus fruits. But it does not seem that a proper all-comprehensive plan as yet has been proposed.

Advertising has come to a point where today it is just about as ethical and high-minded as is any other business; but there are in advertising, as in other lines of business, promoters who can talk faster than other persons can think. Listening to the claims made for the present proposed campaign we detect arguments which to us are highly reminiscent of the great Eat More Rice campaign a few years back, which took rank as one of the most colossal commodity advertising failures.

We see by the papers that our old friend A. R. Sandlin, of Lake County Growers Inc. at Leesburg, whom we also associate with a certain railroad station in Alabama, has been in Mexico, "where he has business in-

terests". It looks to us as if the Sandlin person is getting rather badly scattered.

Apropos of bonus-legislation we wonder if the Congress did not err in adjourning before it had made suitable provision for a pension for the widow of the Unknown Soldier.

UNNECESSARY

Wife (after telephone call)—
"That was a very close relative of mine."

Husband—"That explanation is not necessary. All your relatives are close."—Selected.

UNCERTAIN

Mannish Dressed Lady—"Did you catch any fish, little boy?"

Country Boy—"No."

Mannish Dressed Lady—"No, what?"

Country boy, gazing dubiously at her clothes—"Durned if I know."—Selected.

Our idea of perfect summer bliss would be an ocean in the back yard, a mint bed under the window, the "makin's" in the ice box, and a good cigar within reach.

A FREE BOOK EVERY GROWER AND SHIPPER SHOULD HAVE



CONTAINS complete information on ETHYLENE—the magic gas which hastens ripening of matured fruits. Learn how to profit with it. Ethylene increases profits, reduces loss, saves time. Write for your copy of "Ethylene for Coloring Matured Fruits and Vegetables" today.

CARBIDE AND CARBON CHEMICALS CORPORATION

30 East 42nd Street, New York City

1310 Santee Street, Los Angeles

114 Sansome Street, San Francisco, California

Warehouses in Los Angeles, Tampa, Jacksonville,
and other principal cities

Units of Union Carbide  and Carbon Corporation

The Best Market In Florida

Is made up of the citrus growers of this state.

The logical medium through which to appeal to this group is

The Citrus Industry

because it is addressed solely to this group of readers.

A lot of advertisers have already learned this.

—A trial will convince you of the wisdom of this course.

CLASSIFIED

Advertisements

The rate for advertisements of this nature is only five cents per word for each insertion. You may count the number of words you have, multiply it by five, and you will have the cost of the advertisement for one insertion. Multiply this by the total number of insertions desired and you will have the total cost. This rate is so low that we cannot charge classified accounts, and would, therefore, appreciate a remittance with order. No advertisement accepted for less than 50 cents.

MISCELLANEOUS

DUSTER — Niagara, Air-Cooled engine Steel truck-mounted. Nearly new. Half price. Samuel Kidder, Monticello, Fla.

SEEDS—ROUGH LEMON, SOUR ORANGE, CLEOPATRA. Pure, fresh, good germination. Also seedlings lineout size. De Soto Nurseries, DeSoto City, Fla.

FANCY ABAKKA pineapple plants. R. A. Sager, Ankona, Florida.

HIGH BLOOD PRESSURE easily, inexpensively overcome, without drugs. Send address. Dr. J. B. Stokes, Mohawk, Fla.

CROTALARIA SPECTABILIS—Seed for sale. New crop, well cured, bright and clean. Price 25c per pound in 100 pound lots and over, 80c per pound in less quantities, f. o. b. Hastings, Bunnell, Lowell and San Antonio, Florida. F. M. LEONARD & COMPANY, Hastings, Florida.

SCENIC HIGHWAY NURSERIES has a large stock of early and late grapefruit and oranges. One, two and three year buds. This nursery has been operated since 1883 by G. H. Gibbons, Waverly, Fla.

RAISE PIGEONS—Profit and pleasure. Illustrated descriptive catalogue postage six cents. Vrana Farms, Box 314a, Clayton, Missouri.

ORANGE PACKERS ATTENTION — Two chemical transparent flexible orange coating processes for sale; royalty or license basis. Patent pending. Dr. C. V. Berry, 251 West 111th Street, New York City.

PUREBRED PULETS FOR SALE—White Leghorns and Anconas ready to ship. Barred Rocks and R. I. Reds shortly. Several hundred yearling White Leghorn hens now laying 70%. Write or wire for prices. C. A. Norman, Dr. 1440, Knoxville, Tenn.

LAREDO SOY BEANS, considered free from nematode, excellent for hay and soil improvement. Write the Baldwin County Seed Growers Association, Loxley, Alabama, for prices.

CABBAGE and Collard plants. All varieties now ready. Postpaid 500-\$1.00; 1,000-\$1.50. Express \$1.00 per 1,000. Write for prices on large quantities. Satisfaction guaranteed. P. D. Fulwood, Tifton, Ga.

NEW COMMERCIAL lemon for Florida, the Perrine proven. All residents need yard trees, keeping Florida money at home. Booking orders for budded stock for Winter delivery. DeSoto Nurseries, DeSoto City, Fla.

WANTED—To hear from owner of land for sale. O. Hawley, Baldwin, Wis.

SATSUMA BUDWOOD from Bearing Trees. Hills Fruit Farm, Panama City, Fla.

SEED—Rough lemon, sour orange, cleopatra. New crop from type true parent trees. Also thrifty seedlings. DeSoto Nurseries, De Soto City, Florida.

WANTED—To hear from owner having good farm for sale. Cash price, particulars, John Black, Chippewa Falls, Wisconsin.

THE CITRUS INDUSTRY

CITRUS ADVERTISING CAMPAIGN URGED BY FARM WEEK SPEAKER

Gainesville, Fla.—Presenting figures which clearly showed the value of advertising Florida citrus, James C. Morton, vice-president of the Citrus Growers' Clearing House Association, speaking at Farmers' Week here recently, urged that every grower in the state join in the proposed campaign to advertise Florida citrus.

He gave as an example the \$40,000 grapefruit advertising campaign by the Clearing House and the Florida Citrus Exchange which began last March. For the 10 weeks preceding the campaign the auction price of Florida grapefruit averaged \$2.05 per box while during the next 10 weeks the average jumped to \$2.67. This 62 cents per box increase in price, he explained, was not due to a decrease in volume sold because movements for the two periods were about the same. It was not due to seasonal gain in price, since over the same period last year the gain was only 8 cents per box.

During the 10 weeks after the beginning of the advertising campaign

2,481,000 boxes of grapefruit were sold. At the average increase of 62 cents per box, that meant \$1,538,000 more in the pockets of Florida grapefruit growers. If only one-sixth of the sum were credited to the advertising it would have paid \$6.50 for every dollar invested. If half of the increase were credited to advertising it would pay Florida's citrus fertilizer bill for the year, he explained.

Mr. Morton then outlined the all-state citrus advertising program now being planned. An effort is being made to have every grower in the state assure his shipper that he will deduct 2 cents a box for grapefruit and oranges and 5 cents a box for tangerines for the advertising fund.

Corn should be fumigated with carbon disulfide to kill weevils. It should be done in a tight crib and a pound of liquid will be needed for each 100 cubic feet of air space.

Seed corn should be gathered from the best stalks in the field as soon as it is dry.

When writing advertisers please mention THE CITRUS INDUSTRY.

HOTEL HILLSBORO

(Tampa's Largest All Year Hotel)

INVITES YOU TO USE ITS FACILITIES

**"TOP O' THE TOWN" Dining Room
COFFEE SHOP
CAFETERIA**

Large Rooms
Single With Bath
\$2 to \$5
Double With Bath
\$4 to \$7

L. B. SKINNER, Prop.

C. J. JACKSON, Mgr.

"JACKSONVILLE'S LEADING HOTEL"



THE SEMINOLE

CHAS. B. GRINER, Manager

Caters especially to the fathers and mothers, sons and daughters of the South. YOUR hotel—and THE hotel for your family. — Absolutely Fireproof and Modern.

RATES, \$1.50 UP.

FREE GARAGE